

I/WE CLAIM:

1. A method of providing secure network management communications within a communication network, the communication network including a plurality of network elements each adapted to generate and process legacy network management messages in conformance with a legacy management system, the method comprising the steps of:

embedding a first legacy network management message within a first Simple Network Management Protocol (SNMP) message at a first network element;

transmitting the first SNMP message over the network to a second network element; and

extracting the first legacy network management message from the first SNMP message at the second network element.

2. The method of claim 1 wherein the step of transmitting the first SNMP message comprises transmitting the first SNMP message in conformance with a secure version of SNMP.

3. The method of claim 2 wherein the step of transmitting the first SNMP message comprises transmitting the first SNMP message in conformance with SNMP version 3 (SNMPv3).

4. The method of claim 1 wherein the legacy management system provides less security than SNMP.

5. The method of claim 1 comprising the further steps of:

generating the first legacy network management message at the first network element; and

processing the first legacy network management message at the second network element.

6. The method of claim 5 comprising the further steps of:

generating a second legacy network management message at the second network element in response to the first legacy network management message;

embedding the second legacy network management message within a second SNMP message at the second network element;

transmitting the second SNMP message over the network to the first network element; and

extracting the second legacy network management message from the second SNMP message at the first network element.

7. The method of claim 1 wherein the first network element is a management station, and wherein the second network element is a node.

8. The method of claim 1 wherein the first network element is a node, and wherein the second network element is a management station.

9. A network management system within a communication network, the communication network including a management station and a node, comprising:

a legacy interface at the management station for generating a first legacy network management message in conformance with a legacy network management protocol;

a Simple Network Management Protocol (SNMP) initiator at the management station for embedding the first legacy network management message within a first SNMP message and for transmitting the first SNMP message to the node;

an SNMP agent at the node for receiving the first SNMP message and for extracting the first legacy network management message from the first SNMP message; and

a legacy agent at the node for processing the legacy network management message in conformance with the legacy network management protocol.

10. The system of claim 9 wherein the SNMP initiator is adapted to transmit the first SNMP message in conformance with a secure version of SNMP.

11. The system of claim 10 wherein the SNMP initiator is adapted to transmit the first SNMP message in conformance with SNMP version 3 (SNMPv3).

12. The system of claim 9 wherein the legacy network management protocol provides less security than SNMP.

13. A Simple Network Management Protocol (SNMP) initiator at a management station within a communication network, comprising:

instructions for receiving a legacy network management message which conforms to a legacy network management protocol;

instructions for embedding the legacy network management message within an SNMP message; and

instructions for transmitting the SNMP message to a node within the communication network.

14. The SNMP initiator of claim 13 wherein the legacy network management protocol provides less security than SNMP.

15. A Simple Network Management Protocol (SNMP) agent at a node within a communication network, comprising:

- instructions for receiving a first SNMP message from a management station within a communication network;
- instructions for extracting a first legacy network management message from the first SNMP message, the first legacy network management message conforming to a legacy network management protocol; and
- instructions for sending the first legacy network management message to a legacy agent at the node.

16. The SNMP agent of claim 15 wherein the legacy network management protocol provides less security than SNMP.

17. The SNMP agent of claim 15 further comprising:

- instructions for receiving a second legacy network management message from the legacy agent;
- instructions for embedding the second legacy network management message within a second SNMP message; and
- instructions for transmitting the second SNMP message to the management station.

18. The SNMP agent of claim 17 wherein the legacy network management protocol provides less security than SNMP.